

What is claimed is:

1. A method of displaying information to viewers comprising the steps of:
providing a projector capable of presenting an image,

5 providing a flexible screen having a rear surface for receiving light from the
projector, a viewing surface opposite the rear surface, and a light absorbing layer for
rendering the screen substantially opaque in ambient lit conditions when no image is
projected on the screen by the projector,

providing a removable adhesive,

10 selecting a substantially transparent surface in a position capable of being viewed;
adhering the screen on the substantially transparent surface with the removable
adhesive,

projecting an image from the projector onto the rear surface of the screen to
provide the information to the viewers.

15 2. A method according to claim 1 further comprising the step of removing the
screen from the substantially transparent surface after a time period.

20 3. A method according to claim 1 wherein the step of providing a removable
adhesive comprises the step of providing a reusable adhesive and the method further
comprises the steps of:

removing the screen from the substantially transparent surface after a time period,
and

25 adhering the screen to a different substantially transparent surface at a separate
location.

4. A method according to claim 1 wherein the step of providing a flexible
screen comprises the step of providing a non-holographic screen.

30 5. A method according to claim 1 wherein the step of providing a removable
adhesive comprises the step of providing an optical adhesive.

6. A method according to claim 1 wherein the step of providing a flexible screen comprises the step of providing a screen having a plurality of refractive elements, a flexible light transmitting substrate, a light absorbing layer associated with the light transmitting substrate for controlling ambient light rejection so that the screen appears
5 substantially dark when no light is projected onto the screen from the projector.

7. A method of displaying information to viewers comprising the steps of:
providing a projector capable of presenting an image,
providing a non-holographic flexible screen having a rear surface for receiving
10 light from the projector, and a viewing surface opposite the rear surface,
providing a removable adhesive,
selecting a substantially transparent surface in a position capable of being viewed,
adhering the screen on the substantially transparent surface with the removable
adhesive,
15 projecting an image from the projector onto the rear surface of the screen to
provide the information to the viewers.

8. A method of displaying information to viewers comprising the steps of:
providing a projector capable of presenting an image,
20 providing a flexible screen having a rear surface for receiving light from the
projector, and a viewing surface opposite the rear surface,
providing a cling material,
selecting a substantially transparent surface in a position capable of being viewed,
removably attaching the screen to the substantially transparent surface with the
25 cling material,
projecting an image from the projector onto the rear surface of the screen to
provide the information to the viewers.

9. A method of displaying information to viewers comprising the steps of:
30 providing a projector capable of presenting an image,
providing a flexible screen having a rear surface for receiving light from the
projector, a viewing surface opposite the rear surface, and a light absorbing layer for

rendering the screen substantially opaque in ambient lit conditions when no image is projected on the screen by the projector

providing a mechanical fastener,

selecting a substantially transparent surface in a position capable of being viewed,

5 removably associating the screen with the substantially transparent surface with the mechanical fastener,

projecting an image from the projector onto the rear surface of the screen to provide the information to the viewers.

10 10. A method according to claim 9 wherein the step of providing a mechanical fastener comprises the step of providing a removable mechanical fastener.

11. A projection screen for use in an optical system having a projector that provides information to viewers, the projection screen comprising:

15 a flexible light transmitting substrate,

light absorbing means associated with the light transmitting substrate for controlling ambient light rejection so that the screen appears substantially dark in ambient lit conditions when no light is projected on the screen from the projector, and

20 a removable adhesive associated with the screen to releasably adhere the screen in a position associated with a substantially transparent surface so that viewers may view the screen through the substantially transparent surface.

25 12. A projection screen according to claim 11 wherein the screen includes a plurality of refractive elements.

13. A projection screen according to claim 12, wherein the plurality of refractive elements comprise glass beads.

30 14. A projection screen according to claim 11 wherein the removable adhesive is an optical adhesive.

15. A projection screen according to claim 14 wherein the optical adhesive is a repositionable adhesive.

16. A screen according to claim 11 wherein the screen is a disposable screen
5 that is conformable to a substantially non-planar substrate.

17. A screen according to claim 11 wherein the screen may be readily manually cut to customize the shape of the screen.

10 18. A screen according to claim 11 wherein the screen includes a rear surface for receiving light from a the projector and a viewing surface opposite the front surface, and removable adhesive is situated on the viewing surface of the screen.

15 19. A screen according to claim 18 wherein the removable adhesive is situated on substantially the entire viewing surface of the screen.

20. A screen according to claim 11 further including a substantially opaque border.

20 21. A projection screen for use in an optical system having a projector that provides information to viewers, the projection screen comprising:

a flexible light transmitting substrate,

light absorbing means associated with the light transmitting substrate for
controlling ambient light rejection so that the screen appears substantially dark when no
25 light is projected on the screen from the projector, and

a cling material associated with the screen to releasably attach the screen in a position associated with a substantially transparent surface so that viewers may view the screen through the substantially transparent surface.

30 22. A projection screen for use in an optical system having a projector that provides information to viewers, the projection screen comprising:

a plurality of glass beads,

a flexible light transmitting substrate,

light absorbing means associated with the light transmitting substrate for controlling ambient light rejection so that the screen appears substantially dark when no light is projected on the screen from the projector, and

5 a mechanical fastener associated with the screen to releasably attach the screen in a position associated with a substantially transparent surface so that viewers may view the screen through the substantially transparent surface.

10 23. A projection screen according to claim 22 wherein the mechanical fastener is a removable mechanical fastener.

24. A optical system comprising, in combination,
a projector for presenting an image,
a screen having first and second surfaces, the screen adapted to receive an image
15 from the projector and present it to a viewer, the screen having light absorbing means for absorbing ambient light, and
an adhesive associated with the screen for optically coupling the screen to a substantially transparent window in a position capable of being viewed.

20 25. A system according to claim 24 wherein the screen comprises a front projection screen.

26. A system according to claim 24 wherein the adhesive is a removable adhesive.

25 27. A system according to claim 24 wherein the adhesive is a permanent adhesive.

28. A system according to claim 24 wherein the screen is flexible.

30 29. A system according to claim 24 wherein the screen is conformable.

30. A system according to claim 24 further including cutting means for cutting the screen to a customize shape.

31. A system according to claim 24 further including a roller for removing
5 bubbles encountered during installation.

32. A system according to claim 24 wherein the screen comprises a rear projection screen.

10 33. A projection screen comprising:
a first side and a second side,
an array of refractive elements wherein said elements are substantially surrounded by an opaque matrix, said refractive elements exhibit a refractive index in the range of 1.4 to 2.0,
15 said opaque matrix defining an array of apertures,
said screen exhibiting a mechanical flexibility sufficient to allow it to be rolled up into a cylindrical roll having an inner diameter of 15.25 centimeters (6") or less, and
an attachment member associated with at least one of said first and said second sides of said screen.

20 34. The screen of claim 33 wherein said refractive index is in the range of 1.5 to 1.8.

25 35. The screen of claim 33 wherein said refractive index is in the range of 1.6 to 1.7.

36. The screen of claim 33 wherein said attachment layer is selected from the group consisting of pressure sensitive adhesives, in situ cured adhesives, water activated adhesives, and cling materials.

30 37. The screen of claim 33 wherein the attachment member comprises mechanical fastening means.

38. The screen of claim 33 wherein said refractive elements comprise microspheres.

5 39. The screen of claim 33 wherein said refractive elements comprise glass beads.

40. A screen according to claim 33 wherein the ambient light contrast ratio of the screen is greater than 25.

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